

believed *Ancylastrum* to be *Ancylus* s. s., but there is no reason to consider it as a substitute for *Ancylus* Gray (1840 or 1847).

Finally to take up the third question, as no type was designated or indicated in the original description of *Ancylastrum*, the first subsequent choice of type is operative. The species later chosen by the author himself, *A. cumingianus* (either date) is included in the original description, according to Opinion 46 of the International Commission, and must be the true type of the genus. *Ancylastrum* does apply to the Tasmanian group and *Pseudancylus* is the correct generic name for *Ancylus fluviatilis* Müller.

THE STATUS OF AMICULA

BY TOM IREDALE*

Loricata nomenclature is still unsettled, as Pilsbry's memorable basic work must be reviewed in the light of the thirty years' intensive research initiated by its publication. In the Bulletin of the U. S. National Museum No. 112, 1921, pp. 197-198, Dall included a Family Cryptochitonidae with three genera, *Cryptochiton* Gray 1847, for *stelleri* Middendorff, *Chlamydochiton* Dall 1878, for *amiculatus* Pallas, and *Symmetrogephyrus* (Middendorff 1848) Chenu 1859, for *pallasii* Middendorff and *vestitus* Broderip and Sowerby. As I am partly responsible for this nomination it is incumbent to record some apparently necessary rectifications. In the Proc. Malac. Soc. Lond., Vol. xi, June, 1914, pp. 128-129, I showed that *Amicula* in 1840 was indeterminable exactly, and that in 1843 it fell as a synonym of *Cryptoconchus*. Apparently this conclusion was accepted without careful criticism but it was not infallible. Twice in the year 1842 *Amicula* had been noted—admittedly in an indirect manner—in an acceptable place, and as these introductions agree there can be no argument as to the recognition of the genus. However it is regrettable that through this observation *Amicula* must replace *Cryptochiton* as used by Dall, and the family name be cited as *Amiculidae*. Thus, Sowerby in the

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second edition of the Conchological Manual, p. 61, included *Amicula* with the definition "A genus formed for the reception of *Chiton amiculatus*, Auct., the valves of which are covered by an integument; so as to be completely hidden externally." Then a good figure is given, No. 507, and in the explanation to the plate on p. 311, *Amicula* is again cited. The figure is that of the shell known as *Cryptochiton stelleri* Middendorff. The second edition was published in 1842, and a reprint with the wording "third edition" appeared in 1846. Either of these may be referred to. Simultaneously Lovell Reeve issued his *Conchologica Systematica*, and in Vol. ii, p. 9, wrote "In one species of the *Chiton amiculatus* (Plates CXXXII & CXXXIII, Fig. 80), the mantle is expanded entirely over the shell, and it has on this account been separated by Gray for the formation of a new genus, *Amicula*", and on p. 11 *Amicula* is given as the generic name for the shell figured as *Chiton amiculatus*, and this is again the *Cryptochiton stelleri* of Middendorff. This introduction is discussed by Middendorff himself (Mem. sci. nat. Acad. Imp. Sci. St. Petersburg, Vol. vi, 1847, p. 96, Feb., 1848) who proposes *Amiculum* as the correct spelling, while rejecting the name.

When Middendorff proposed *Cryptochiton* he divided the genus *Chiton* into two subgenera *Cryptochiton* and *Phaenochiton*. The latter he again divided into two sections *Dichachiton* and *Hama-chiton*, and then of the former introduced two subsections *Symmetrogephyrus* and *Ametrogephyrus*. The last named has been cited as a synonym of *Cryptoplax*, its correct location, but the preceding one Dall has made use of as typified by Chenu. Dall many years ago concluded "Middendorff adopted a singular nomenclature, in which the genus was divided into a great number of sections, subsections, &c., so that his work can hardly be classed as binomial in the Linnean sense". This is not accepted today, as Middendorff proves a strictly binomial writer, and his subsections automatically become of higher value and all legitimate. The type of a less group would be available for a higher grouping, but as no type designations seem to have been made except that of *Symmetrogephyrus* it will save trouble and discussion to name as type of *Phaenochiton*

and *Dichachiton* as well as of *Ametrogephyrus*, *Chiton larvaeformis* Blainville. Thus these names will encumber the synonymy of *Cryptoplax*, but otherwise make no confusion.

THE ACANTHODORIDIDAE OF THE CALIFORNIA COAST

BY F. M. MAC FARLAND

The genus *Acanthodoris* was founded by J. E. Gray in 1850 for the reception of the *Doris pilosa* of O. F. Müller, described originally from the Norwegian coast, but of very wide distribution, having been taken generally in northern European waters and in the Mediterranean, on the coasts of Iceland, Greenland, New England, Alaska and the western coast of British America, while two very doubtful varieties have even been recorded from Tasmania and New Zealand.

The genus diagnosis as extended by Gray ('57) was based upon the careful anatomical and systematic studies of Alder and Hancock ('51, '55), and has been amended somewhat by later writers, especially by Bergh ('79, '80). The type species of the genus is recorded as occurring generally in the northern circumpolar waters, but it is not improbable that a closer study of a larger series of individuals may establish varietal and even specific differences between the Alaskan and the European forms. Specific distinction is much more probable in the case of the two South Pacific varieties of *A. pilosa* (O. F. M.) described by Bergh ('05). One of these has been provisionally identified by Eliot ('07) as being identical with *Ac. mollicella* Abraham. But two valid species seem to be found in European waters, *Ac. pilosa* (O. F. M.) and *Ac. subquadrata* A. & H., while Verrill has recorded the genotype and three other species, two of which are undoubtedly varieties only, from the New England coast. The genus seems to reach much greater diversity in Pacific waters as the following list indicates.

1. *Ac. pilosa* (O. F. M.). Kyska Harbor, Popoff Strait; Yukon Harbor (Shumagin Island), Alaska. Bergh ('80).
2. *Ac. pilosa* var. *albescens* Bergh. Kyska Harbor, Alaska.